

Independent claim 1 recites a method for automatically mapping state elements between a first circuit and a second circuit, that includes, *inter alia*, an inversion detection phase including detecting whether the mappings are inverse mappings.

As discussed in the specification, an inversion detection phase is employed to determine the polarity (direct vs. inverse mapped status) of the mappings and to validate the mappings identified in the structural phase. See Specification, page 5, lines 1-3. It is submitted that the Burch reference does not disclose (or even suggest) this feature of independent claim 1.

While the Office Action asserts that the Burch reference discloses this feature in the logic discussion on cols. 3-5, this section does not, in fact, disclose detecting whether the mappings are inverse mappings. This section defines the conditions for finding equivalence by semi-inductive predicates, but does not indicate or mention the possibility of latch elements having reversed polarity, and how to account for such elements.

It is therefore submitted that Burch does not anticipate the subject matter of independent claim 1.

As independent claims 18 and 20 recite features analogous to those of claim 1, it is submitted that they are also not anticipated by the Burch reference.

Withdrawal of the rejection of claims 1, 18 and 20 under 35 U.S.C. § 102 is therefore respectfully requested.

Claims 1-21 have been rejected as being unpatentable under 35 U.S.C. §103(a) over Burch in view of U.S. Patent No. 6,651,225 to Lin et al. ("Lin").

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

It is submitted that the Lin reference fails to cure the deficiencies of the primary

Burke reference discussed above with respect to claim 1, and that therefore, the combination of Burch and Lin does not disclose or suggest each of the features of independent claims 1, 18 and 20. In particular, Lin also does not mention or refer to inverse mappings at all, let alone detecting whether the mappings are inverse mappings.

It is accordingly submitted that the combination of Burch and Lin does not render obvious all of the features of independent claims 1, 18 and 20, or of their respective dependent claims 2-17, 19 and 21.

Accordingly, withdrawal of the rejection of claims 1-21 under 35 U.S.C. § 103(a) is therefore respectfully requested.

CONCLUSION

All issues having been addressed, it is believed that the present application is in condition for allowance. Prompt reconsideration and allowance of the present application are respectfully requested.


Respectfully submitted,

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